

REMARKS

Applicant respectfully requests reconsideration of the application.

Preliminary Issues

The Office objected to the amendment filed February 2, 2006, as allegedly introducing new matter. In particular, "silica-filled polyolefin" (claims 3, 16 and 31) and glycol modified polyethylene terephthalate (claim 7) are alleged to constitute new matter.

The Office rejected claims 3, 7, 16 and 31 as failing to comply with the written description requirement. Regarding claims 3, 16 and 31, the Examiner contends that the replacement of the term TESLIN with a broader generic term violates the written description requirement.

The use of the term "silica filled polyolefin" is neither new matter nor violates the written description requirement. The application incorporates the teachings of U.S. Patent 6,066,594 to Gunn et al. ("Gunn") at paragraphs 9 and 13, and specifically incorporates Gunn in paragraph 13 in the context of laminated document structures. At col. 3, lines 1-5, Gunn refers to a silica filled polyolefin as a more general term that includes TESLIN ® material. Since this teaching is incorporated into the application, the amendment of TESLIN to silica filled polyolefin does not add new matter and amended claim satisfies the written description requirement.

Nevertheless, the issue raised about "silica filled" in claims 3, 16, and 31 is moot because this phrase has been deleted. The amended form of the claim is supported in the specification, which includes Gunn incorporated by reference.

Regarding claim 7, the Office appears to contend that an alleged lack of evidence regarding generic language for "PET 5011" predating the filing date is an indication that the inventor lacked possession of the invention of claim 7 at the time of filing the application. Applicant respectfully disagrees. The specification at paragraphs 30 and 31 together with the rest of the teachings of the specification provide sufficient support for the language of claim 7 to establish that the inventor had possession of the invention of claim 7 because it teaches "the PETG comprises a glycol modified polyethylene terephthalate." In particular, the specification provides teaching indicating that PET refers to a polyethylene terephthalate and G represents

glycol modifiers. The claim no longer refers to 5011 in particular. Evidence of generic language for the term PETG 5011 is not needed to provide written description for the current claim language because the specification provides written description support for claim 7.

Claims 1-20, 23, 27, 31-32 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Gunn in view of U.S. Patent Publication 2002-0182352 to Mitten et al. ("Mitten") and U.S. Patent No. 6,803,114 to Vere et al. ("Vere").

Applicant respectfully traverses the rejection.

Claims 1-10

Applicant respectfully submits that the Office has misinterpreted Gunn. Gunn does not teach a polyester laminate formed from different polyester materials as recited in claim 1. In the cited passage at col. 3, line 37 to col. 4 line 7, Gunn refers to "the two layers of substantially transparent polymer." See, in particular, col. 3, line 39. The reference to "the two layers" refers to layers that are fixed to opposite sides of a core layer. See col. 2, lines 26-27. Therefore, Gunn's teaching of two layers does not correspond to a polyester laminated formed from different polyester materials because Gunn's two layers do not form a single laminate, but instead, are two separate and distinct laminate layers on opposite sides of the core.

Gunn refers to PET and PETG as being suitable for use as separate embodiments of a transparent polymer layer. Gunn fails to suggest that these two materials could be used together to create a polyester laminate as claimed. Gunn teaches that the two layers of substantially transparent polymer are fixed on opposite sides of the core layer and could be either PET or PETG, not a combination of PET and PETG.

Finally, Gunn suggests that these polymer layers may be fixed to opposite sides of the core using heat and pressure alone, but Gunn indicates that "it is generally preferred to provide an adhesive layer on each polymer layer to improve its adhesion to the core layer." See col. 3, lines 45-47. Gunn teaches that the adhesive layer may be an adhesive that is coated, cast or extruded on to one surface of the polymer sheet. This teaching in Gunn teaches away from the elements of claim 1 in which the polyester laminate is formed from different polyester materials, including a material providing a layer having a surface with bonding property for bonding directly to a core without adhesive.

While Gunn suggests that a polymer layer may be fixed to a core with heat and pressure alone, Gunn does not teach a specific embodiment for fixing the polymer to the core with heat and pressure alone, and further, Gunn does not teach that this polymer layer is formed from different polyester materials as claimed. Gunn identifies two separate preferred polyester embodiments for the polymer layer, namely PET as one embodiment, and PETG as the other. Gunn's preferred method for fixing the polymer layer to the core is through an adhesive layer.

The combination of Gunn and Mitten do not teach all of the elements of claim 1 because Mitten does not teach the elements of claim 1 missing from Gunn identified above. In particular, Mitten teaches a multilayer film 20 including an engineering resin layer 24 tied to a commodity resin layer 26 by means of a tie layer 28. Mitten teaches away from the claim elements because, in contrast to claim 1, it requires the use of a tie layer to tie the engineering resin layer to the commodity resin layer.

Mitten is not combinable with Gunn because it fails to teach or suggest a laminate for a document, and in particular, a laminate for bonding directly to the core as claimed. Moreover, one of ordinary skill in the art would not be led to combine the teachings of Gunn and Mitten to produce the invention of claim 1 because the cited art recommends the use of a tie or adhesive layer.

Vere does not establish that it is well known in the art to use PETG as a fusible bonding layer between disparate polymeric layers. Vere states that: "The card body comprises different laminated plastic layers, directly superimposed on each other. The term "directly superimposed" means that the plastic layers are in direct contact with each other, **or in contact with each other via a bonding agent.**" See col. 3, lines 11-15. Veres also states that a bonding layer, separate from the PETG layer is used to join the layers together: "Each outer layer is connected to the intermediate layer via a bonding layer, for which the melting point is below that of said outer layers." Col. 2, lines 4-6. In other words, Vere specifically teaches the use of a separate bonding layer in addition to the PETG layer. Vere, therefore, is not reliable as a basis for the Office's conclusion.

The dependent claims of claim 1 include elements that further distinguish the cited combination of references.

As one example, claim 9 recites “material providing the durability property comprises PCTA and the material providing the surface with the bonding property comprises PETG.” Mitten refers to these materials as potentially being part of both an engineering and additional tie layers, but does not teach the specific combination claimed that forms a laminate with PCTA and PETG providing a layer having a surface for direct bonding to a core.

As another example, claim 10 recites “the bonding property comprises a property for facilitating bonding directly to a polyester core to enable formation of a polyester document structure without a discernable interface between the polyester laminate and polyester core.” The cited combination of art fails to teach or suggest this “polyester document structure” as claimed.

Claims 11-16

Regarding claim 11, the cited art does not teach a document laminate formed of PCTA and PETG as claimed. Gunn does not teach the use of PCTA as claimed. Mitten generally refers to PCTA and PETG among a list of other materials that might be used in both the engineering and additional tie layers. Even when combined, the cited art fails to teach or suggest that the specific formulation claimed of an outer surface of PCTA and an inner surface of PETG. In addition, the cited art fails to suggest a laminate for a document that comprises a polyester composite material formed from different polyester materials.

The dependent claims of claim 11 include elements that further distinguish the cited art.

Regarding claim 13, the cited art fails to suggest the use of PETG as a bonding layer for bonding directly to a document core without adhesive in combination with the other claim elements. Claim 14 has elements that further distinguish the cited art, such as, “PCTA forms a durable outer layer on the PETG.”

Regarding claim 15, the cited art fails to teach “the PETG is operable to be bonded directly to a core using a roll to roll or platen press process” in combination with the other claim elements.

Claims 17-19

Regarding claim 17, Gunn does not teach the claimed method. Gunn's teaching of coating, casting or extruding an adhesive layer onto the polymer sheet (col. 3, line 50) does not suggest joining first and second melt streams. The polymer sheet is not a “melt stream” in Gunn.

Mitten refers to co-extruding a sheet comprising multiple layers, yet Mitten does not teach or suggest: “cooling the joined streams to form a polyester laminate in which the first polymer material provides a chemical or mechanical resistance property and the second polymer provides a bonding property for bonding directly to a core” as claimed. The result of Mitten's co-extrusion process is a material including an engineering resin layer, a tie layer and a commodity resin layer. This co-extrusion does not form a polyester laminate with the claimed bonding property for bonding directly to a core. Because of the disparate teachings (e.g., use of tie or adhesive layers) and different fields (Mitten does not relate to document laminates), it would not have been obvious to combine Gunn and Mitten.

Claims 20 and 23

The combined teachings of Gunn, Mitten and Vere fail to teach or suggest joining PCTA and PETG to form a laminate as recited in claim 20.

Claim 27

The combined teachings of Gunn, Mitten and Vere fail to suggest making a laminated document as claimed. Gunn fails to teach the use of different polyester materials to form the laminate as claimed, and specifically does not teach PCTA as claimed. Mitten does not teach joining PCTA and PETG as claimed to form a polyester laminate. Mitten refers to these materials as both being candidates for an engineering resin layer and an additional tie layer. However, there is no specific teaching to join them to form a polyester laminate including PCTA and PETG, where the PETG is used to bond the laminate directly to a printed core layer. The Office concludes that the cited combination renders claim 27 obvious despite the fact that this combination does not have all of the elements of the claimed method of forming a polyester

laminate from the polyester materials as claimed. There is no teaching of any printing on this polyolefin, nor is there any teaching of bonding a laminate comprised of PCTA and PETG directly to it as claimed.

Claims 30-32

The cited combination does not include all of the elements of the laminated document structure recited in claim 30. Gunn, Mitten and Vere do not teach a laminate including PCTA and PETG, and they do not teach a core layer bonded directly to the laminate using the bonding property of PETG. As noted previously, there is no motivation to combine the teachings of Gunn and Mitten because Mittten teaches away from the use of materials that are bonded directly as claimed, and Gunn does not teach the use of polyester laminate formed from different polyester materials.

Claims 31 and 32 provide additional distinguishing elements regarding types of core layers.

New claim 33 adds further elements to claim 1 that distinguish it from the cited combination. The similarity in the degree of melting and viscosity provide protection against delamination attack, which is particularly useful in a laminate for a document. Gunn and Vere fail to teach a laminate structure with these properties, and Mitten requires the use of tie layer and is in a different application area (namely, a container).


Date: September 18, 2006

Customer Number 23735

Telephone: 503-469-4800
FAX: 503-469-4777

Respectfully submitted,

DIGIMARC CORPORATION

By 
Joel R. Meyer
Registration No. 37,677